IMPORTANT NOTE: all students enrolling in CHEM 123 need to attend the first lecture of CHEM 121 (co-requisite) and attend their section of CHEM 123 during the first week of classes

Chem 123 Syllabus

Instructor: Dr. Kristi Kincaid (DBH 242; kincaid@rice.edu)

Summary of key information in the syllabus

- *Course schedule* (it's very complicated, so pay attention!)
- *Course requirements* (because this is a LAB class, there are a lot! You have to come to class and turn something in every week; you also need to buy special materials)
- *Safety policy* (don't hurt yourself! Or me! Or anyone else!)
- *Honor Policy* (it can get a little hazy with lab reports, so be careful)
- *Grading information* (this is what you actually care about! this includes how to request a regrade)

Course Philosophy and Aims

This course is part of a two-semester sequence designed to enhance the material from the general chemistry lecture course and prepare you to enter a scientific research environment. This first semester is focused on teaching the student to think critically as a scientist, and how to develop an experimental approach to chemistry. The skills (both mental and physical) that you will learn in these courses are applicable to any scientific discipline that you may pursue.

Course grade: At the end of the semester, your total lab score will be added up and count as 25% of your combined score for CHEM 121 and 123 (same letter grade for BOTH courses).

Schedule and location:

There are multiple sections that meet each week. Each experiment follows a **2-week sequence**, with the lab performed the first week, and a discussion/data analysis session taking place in the second week. Sections are staggered so that there will be two concurrent sections (one in lab/one in discussion) running most weeks. **All sections meet the first week**. For some weeks, some sections do meet and others do not due to holidays, etc. Make sure that you are aware of the schedule for **YOUR SECTION** throughout the semester. Your section number is based on which section you enrolled in (i.e. Chem 123-001 is section 001). Schedules for each individual section are posted on Canvas for your reference.

Overall Course Schedule (L=lab; D=discussion; X=no meeting):

Monday Date	Week	Section 008 M 2-5:30	Section 001 M 6:30-10	Section 002 Tu 2-5:30	Section 003 Tu 2-5:30	Section 004 W 2-5:30	Section 005 W 2-5:30	Section 006 Th 2-5:30
8/20/2018	1	1L	1L	1L	1L	1L	1L	1L
8/27/2018	2	2L	2L	2L	X	2L	X	2L
9/3/2018	3	Labor Day		2D	2L	2D	2L	2D
9/10/2018	4	2D	2D	3L	2D	3L	2D	3L
9/17/2018	5	3L	3L	3D	3L	3D	3L	3D
9/24/2018	6	3D	3D	4L	3D	4L	3D	4L
10/1/2018	7	4L	4L	4D	4L	4D	4L	4D
10/8/2018	8	midterm recess				5L	4D	5L
10/15/2018	9	4D	4D	5L	4D	5D	5L	5D
10/22/2018	10	5L	5L	5D	5L	6L	5D	6L
10/29/2018	11	5D	5D	6L	5D	6D	6L	6D
11/5/2018	12	6L	6L	6D	6L	7L	6D	7L
11/12/2018	13	6D	6D	7L	6D	7D	7L	7D
11/19/2018	14	7L	7L	7D	7L	THANKSGIVING BREAK -NO CLASS		
11/26/2018	15	7D	7D	X	7D	X	7D	X

Location:
During Lab weeks, students meet in room 180 DBH for a pre-lab lecture before moving to room 200. Discussion groups meet in room 210 DBH. During your first lab, you will be assigned to one of two discussion groups for your section. **Note that discussions will start at a different time than lab (but during the lab period).** These times will be announced during the first class and posted on Canvas.

Lab #	Lab Topic
1	Lab Safety and Drawer Check-In
2	Reactions and stoichiometry
3	Ionization energy/electron affinity
4	Atomic emission spectra
5	Bonding
6	Macromolecular Structures
7	Tmetals and redox

Course Requirements and Guidelines:

Attendance is mandatory for every lab and every discussion session (see "Missed Labs" section for details). **If you do not attend a lab OR a discussion, you will receive zero points for that entire lab. Regardless of the reason for missing lab/discussion, you should absolutely contact Dr. Kincaid ASAP.** It is also the student's responsibility to document his/her attendance by signing in for each lab and discussion (including any make-up sessions). Punctuality is also important**; points will be deducted from your grade for tardiness**. **Extremely late students (>15 minutes) will not be admitted to lab, except at the instructor's discretion.**

Required Materials:

- ✓ Books:
  - Lab Manual: a digital copy is freely available to all students; students are encouraged, but not required to purchase a paper manual may do so (details given in class on how to do so)
  - Readings are recommended from the same texts as the lecture portion of this course
- ✓ Safety gear
  - Lab coats and safety glasses will be provided for you
- ✓ Carbon-copy lab notebook
  - Students are required to use a carbon-copy lab notebook to record their procedure and data in class. Details on purchase options are provided in class.

Safety Requirements:

Students will not be allowed to work the lab if they fail to meet the lab safety regulations

These regulations are detailed in the safety section of the lab manual, and will be covered in the first class meeting. At the beginning of the semester, you will need to complete a safety quiz Canvas *(under "quizzes")* that you have read and agree to abide by the lab safety rules. Furthermore, the instructor or TA must always be physically present for you to work in the lab.

You must wear the following Personal Protective Equipment (PPE) at all times when working in the lab (no exceptions):

- Safety glasses/goggles (provided in lab)
- Long-sleeved, knee-length lab coat (provided during the first week)
- Your skin is a target for chemicals, so cover it all up one way or another! You must wear:
  - Clothing that fully covers you to the ankle
  - Closed-toe shoes with backs (perforated shoes or sandals are not allowed)
- Loose clothing, jewelry, and unrestrained hair may pose additional risk and should be avoided

Based on the experiment or procedure, additional PPE such as gloves may be required. Laboratory gloves should only be worn inside the laboratory.

Academic requirements-Lab Reports (see Appendix I of the lab manual for full details):

Each lab report consists of up to 4 sections. These are explained in detail in your lab manual, but the take home message is that you should expect to have something due every time you show up to lab and discussion. The 4 sections are:

- Pre-lab assignment -due at beginning of lab
    - **Note: Any student who does not hand in a pre-lab assignment will NOT be allowed to perform the lab.**
- Procedure and Data Collection- due at end of lab
- Initial Data analysis- due at beginning of discussion (1 week after experiment)
- Final Report- due at beginning of the next lab (2 weeks after experiment)
- **Final reports will be accepted late, with a penalty of 10 pts per day late. All other sections are not accepted late.**

Grading:

Each lab will be worth 105 points. These points will *usually* be divided as follows:

- Pre-lab assignment (10 pts)
- Procedure and Data Collection (25 pts)
- Initial Data analysis (20 pts)
- Final Report (40 pts)
- Lab TA points (5 points awarded for safety and tidiness)
- Discussion TA points (5 points awarded for participation)

Regrades:

If you think you were graded incorrectly, you may submit your report for a regrade. **Submit all regrade requests directly to Dr. Kincaid**; do NOT submit a regrade request to your TA. To ensure proper record keeping do NOT write on your original lab report; instead, include a separate (small) sheet of paper with your reasons for requesting a regrade. You have **1 week** after a lab is returned to you to submit a regrade request. Failure on your part to collect a graded report does not ensure that you will be given additional time to request a regrade.

Honor policy: Lab reports fall under the scope of Rice's honor code. Discussion is an important part of the scientific process, and you are encouraged to ***discuss*** the lab with your partner, TAs, and classmates. However, you must write your own report. **Be mindful of the difference between collaboration and copying**. Lab partners must individually write their own reports, including all calculations, conclusions, and graphs. For reference, here are some *limited* examples of what is and isn't OK:

It's **OK** to:

- Share raw data with your lab partner.
- Consult any written source except graded lab reports and keys. Always cite any source used.
- Discuss the approach to analyzing data or solving a problem.
- Discuss and compare your final results.
- Ask your TA for help.

It's **NOT OK** to:

- Report data that you did not measure (unless given permission, and cited appropriately)
- Copy or share computer files, even with your lab partner (except for data files).
- Copy graphs, or print 2 copies of the same graph.
- Copy someone else's calculations.
- Copy answers to problems in the reports.
- Use an answer key to help with analysis/reports

Missed labs:

All labs and discussions are mandatory. If you fail to attend a lab OR discussion, you will receive a zero for the entire lab. It is your responsibility to contact Dr. Kincaid as soon as possible when you miss a lab or discussion.

If your absence is excused, you may make up the lab/discussion during another section. Excused absences include: illness that prevents you from physically attending class and approved university commitments, such as travel for a university competition or special event like a university performance. Exams in other classes do NOT fall under this category. If another instructor schedules an exam during your lab time, you should contact that instructor about rescheduling the exam. Elective personal travel and events such as regular club meetings or sports practice do not count as excused absences.

For approved university commitments, contact Dr. Kincaid at least one week in advance of your absence so that you can reschedule to attend a different section. For unscheduled absences, such as severe illness, contact Dr. Kincaid as soon as you realize you will not be able to attend, and arrangements can be made to make up the lab in another section. In the event that you need to make-up a lab or discussion, please consult the overall schedule to be aware of when other sections are performing the same experiment. (You still need to contact Dr. Kincaid to approve the make-up session.) Please note that for missed labs/discussions as well as make-up lab/discussions, your lab report will still be due at the regularly scheduled time, unless otherwise approved. Also, be sure to sign in to document your attendance.

Regardless of the reason for missing lab/discussion, you should absolutely contact Dr. Kincaid ASAP.

Students under 18:

Your parents or legal guardian are required to sign a "Release and Hold Harmless Agreement" before you can work in the lab. Download this form from Canvas and turn in/send a signed paper copy to Anita Walker. Contact Ms. Walker with any questions.

Special Needs:

Any student with a disability requiring accommodations in this class is strongly encouraged to contact the instructor during the first two weeks of class. This course welcomes students who require a physical accommodation to perform laboratory work, but they need to contact Dr. Kincaid prior to their first lab in order to make sure that all safety standards can be met. All discussions will remain confidential. Students should also contact the Disabled Student Services Office in the Ley Student Center.

Education Research:

This semester the instructors will be conducting a study looking at teaching and learning. The purpose of this study is to determine the factors that influence teaching effectiveness and learning. Your participation in this study will last for the duration of the current semester and will entail activities no different from the regular activities you would otherwise engage in as part of the course. Please contact the course instructors if you would like more information or if you would like to opt out of the study.